DUROMAR®

PRODUCT DATA SHEET

4310 FG

High Performance Lining

GENERAL DESCRIPTION

DUROMAR HPL-4310 FG is a high functionality, 100% solids novolac material, which can be applied by conventional airless spray equipment, brush or roller. This coating system was engineered to minimize water vapor transmission rates by employing a proprietary mixture of high aspect ratio, chemically resistant flake glass. This platelet filler blocks microscopic pores, significantly increasing the coatings resistance to cold wall, distilled water, solvents, as well as strong acids.

CHEMICAL DESCRIPTION

Multi-functional epoxy with a uniquely modified cycloaliphatic amine hardener.

Typical Properties	
Components	2
Visual Appearance	High Gloss
Density	1.28
Solids by weight	100%

Chemical Data @ 70ºF	
pH Range	0.5-14.0
Inorganic Acids	Excellent
Organic Acids	Very Good
Alkalis	Excellent
Solvents	Very Good
Hydrocarbons	Excellent

Typical Physical Properties	
Max. Dry Temp (ºF)*	375
Max. Wet Temp (^{o}F)*	300
Functional Cure	72 hrs.
Full Cure	168 hrs.
Repair System	4310 FG
Surface Prep	SSPC-SP 5
Compressive Strength (ASTM D 695)	15,800 psi
Flexural Strength (ASTM D 790)	13,600 psi
Tensile Strength (ASTM D638)	7,700 psi
Elongation (ASTM D638)	1.3%
Adhesion (ASTM D4541)	>2500 psi
Shore D Hardness	80

***Consult Duromar for Specific Application**

Application Information	
Pot Life @ 70ºF	35 min.
Equipment	Brush, Roller, Airless
Number of Coats	2-3
Theoretical Coverage	40 ft^2/gal/40 mils
Film Thickness/Coat	15 mils min. 45 mils max.
Max. DFT	90 mils
Recoat Time @ 70ºF	5 hr. min. 72 hr. max.
Min. Application Temp.	60 ºF
Mixing Ratio by Weight	3.4:1 (B/A)
Mixing Ratio by Volume	2.5:1 (B/A)
Dry to Touch	6 hrs.

FORCE CURING

Force cures are recommended for severe service conditions as both physical and chemical properties are enhanced. Force curing should not start until material has firmly set. Contact **DUROMAR** for specific instructions.

SHELF LIFE

This product has a minimum shelf life of one year when stored in a dry area at 50º-100ºF in the original sealed container.

HANDLING/SAFETY

Warning! Eye and skin irritant. May cause dermatitis and sensitization.

Always read and understand the product MSDS.

Avoid contact with eyes, skin or clothing. Avoid breathing vapor, mist or spray. Use with good ventilation.

FIRST AID

In case of contact:
Eyes: Immediately flush with water for at least 15 minutes.
Skin: Immediately remove from skin with dry cloth followed by thorough washing with soap and water.
Inhalation: Remove to fresh air. If breathing is difficult, give oxygen.
Ingestion: Give large quantity of milk or water, induce vomiting. Contact a physician immediately.

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www.duromar.com

General Application Guidelines

HPL-4310 FG

Always read and understand the specific product Data and MSDS sheets and the **DUROMAR Information and Application Guide** before using these High Performance Lining Products. For more information contact **DUROMAR** at 781-826-2525 or by email at information@duromar.com.

I. STORAGE:

Store all product in a clean, warm area where the temperature remains between 50-100ºF (10-38ºC). Cold products are very viscous and will be difficult to mix and apply.

Products shipped during cold months can remain cold for many days even when stored as recommended. Paste or trowel applied products will remain cold longer than liquid or spray applied products. Heating of the individual components may be required to bring the products to the recommended temperatures.

II. SURFACE PREPARATION: SSPC-SP 5

All surfaces to be lined are to be clean, dry, and oil free. Refer to the Application Manual for specific instructions for various surfaces such as concrete, metal fiberglass, etc.

Minimum surface temperature during application - refer to Product Data Sheet.

For Brush, Roller, or Spray Applied Products, the surface profile must be 3 mils minimum.

III. APPLICATION EQUIPMENT:

Brushes - short bristle, nylon, and non-shedding. Replace when products become hot or stiff.

Rollers - short nap (3/8” max.) non-shedding, with a polyethylene core. Replace when products become hot or stiff.

Airless Spray Equipment – Single, Plural recommendations are listed in the **DUROMAR Information and Application Guide.**

IV. MIXING:

Do not add solvent to any DUROMAR product. These 100% solids materials are formulated to be applied as shipped after proper mixing.

The temperature of the Hardener (A) and Base (B) portions should be between 70-80ºF (20-25ºC). Mix them separately to insure a uniform consistency.

Add the entire contents of the Hardener (A) to the Base (B) bucket. Use a brush or squeegee to assist in the transfer. These portions are accurately measured and best product performance will be obtained if all the Hardener and Base is combined. Pouring from one container to the other (boxing) during mixing is very helpful in insuring complete mixing.

Mix the products until no streaking is observed and then for about one (1) minute longer.

V. APPLICATION:

For hand application, immediately break down the full unit into smaller portions such as roller pans, small buckets, or trowel boards. This will keep the product cooler and improve the useable life.

For spray application using a single or plural component airless system, see Section 4 in the **DUROMAR Information and Application Guide**. Make sure all components are working according to the airless equipment manufacturers’ instructions and the product components are at the recommended temperature before spraying.

VI. OVERCOATING:

When applying multiple coats of any epoxy products, always check for Amine Blush before applying the next coat. Amine Blush may occur when the epoxy surface is cool or in humid environments. It has the appearance and feel of a light oil film on the surface. When dry it has a white chalky appearance. If detected, wash the surface with a 2% hydrochloric acid solution followed by a water wash until the surface pH is between 6-8. Allow to dry before applying the next coat.

VII. CLEAN UP

Most solvents and commonly used thinners such as MEK, acetone, xylene, I,I,I trichloroethane, and safety solvents such as Ensolv, etc., can be used for cleaning tools and equipment. However, as many of these materials are flammable or present other safety hazards, the user should read the MSDS for these materials before using. In no event should these materials be used to clean material from the skin, eyes or clothing.

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